

AK



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------|-------------|----------------------|---------------------|------------------|
| 10/087,485 | 03/01/2002 | Michael A. Pell | SP01-33A | 3020 |
| 22928 | 7590 | 11/17/2003 | EXAMINER | |
| CORNING INCORPORATED | | | NGUYEN, TUAN N | |
| SP-TI-3-1 | | | | |
| CORNING, NY 14831 | | | ART UNIT | PAPER NUMBER |
| | | | 2828 | |

DATE MAILED: 11/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/087,485

Applicant(s)

PELL ET AL.

Examiner

Tuan N Nguyen

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13,15,18,19,27,29-31,41-43,51 and 52 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

- 5) ☐ Claim(s) _____ is/are allowed.

- 6) ☒ Claim(s) 13,15,18,19,27,29-31,41-43,51 and 52 is/are rejected.

- 7) ☐ Claim(s) _____ is/are objected to.

- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.

- 10) ☒ The drawing(s) filed on 10/4/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

Response to Amendment

1. In respond to applicant's amendment filed October 28, 2002, claims 1-12, 14, 16-17, 20-26, 28, 32, "33" 34-40, and 45-50 have been canceled. It is not clear whether the claim 33 has been canceled as indicated by applicant or it is a typo in cancelling the claim 33. Currently, claim 33 is not evaluate, and claims 13, 15, 18, 19, 27, 29, 30, 31, 41-43, 51, 52 are pending.
2. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of new ground(s) of rejection.

Drawings

3. The corrected drawings filed October 14, 2003 has been accepted by the draft person. See attached Draftman comment.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 13, 15, 18, 19, 27, 29, 30, 31, 41-43, 51, 52 are rejected under 35 U.S.C 112, second paragraph, as being indefinite, vague, and confusing for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, **for example**.

Claims 15, and 30 recites an fluoride excimer laser having pulse repetition rate $\geq 4\text{kHz}$ for producing an UV wavelength $< 200\text{nm}$. The claim reciting the excimer laser chamber including *at least one magnesium fluoride crystal optic window for output said $< 200\text{nm}$*

Art Unit: 2828

wavelength, and a 42mm crystal. First, it is vague and indefinite as to the structure of the 42mm crystal, in relation with the magnesium fluoride crystal optic window, and excimer laser chamber; *Where is this crystal located? Is it located inside the chamber and excited and output beam to the magnesium fluoride crystal optic window, or the crystal is part of the optic window? What structural significant of the crystal so that when a given means induced* so that it has a 120nm transmission of at least 30% and a 200 to 210 nm range absorption coefficient $< 0.0017\text{cm}^{-1}$? The claims have insufficient structure and functional relationship to conform the fluoride excimer laser claim invention, which render the claims vague and indefinite. Claims 13, 18, 19, 27, 29, 31, 41-43, 51, 52 are rejected base on the same reason.

(Applicant should focus and clarify the structural of the elements of the invention that gave the wavelength, absorption coefficient characteristic. The structure or composition of the elements and its relation give the claims more patentable weight.)

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

Art Unit: 2828

3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or non-obviousness.
7. Claims 13, 15, 18, 19, 27, 29, 30, 31, 41-43, 51, 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stamm (US 6560254) or Rebhan (US 20010043331) in view of Kleinschmidt et al. (US 6345065).

With respect to claims 15, 30 Stamm (US 6560254 B2) discloses in the ABSTRACT shows in figures 3e, 4a-c, 5, and discloses in (Col 2: 40-67; Col 5-6: 15-67; Col 8; Col 9; Col 11: 15-40; Col 19-24) an ArF or KrF excimer laser, producing a 193nm or <200nm discharge at a pulse rate 4kHz or more, with optical window absorption. Rebhan '331, shows in figure 1 a ArF or KrF excimer laser, where the chamber (6) has windows made of magnesium fluoride or prism which are transmissive or transparent to UV wavelength, as described in the (ABSTRACT), and paragraphs [0006] [0017] [0024] [0029] [0034] where wavelength <200nm. The claims further require a 42mm crystal, Kleinschmidt et al. '065 disclose F2-excimer laser has wavelength < 200nm and the use of crystal in the gas laser system (ABSTRACT, Fig 2, Col 1-2). It is within one skill in the art to provide Stamm '254 or Rebhan '331 the crystal as taught or suggested by Kleinschmidt et al. '065. Discovering the optimum size of the crystal or workable ranges such as wavelength or absorption coefficient involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

With respect to claims 13, 18, 19, 27, 29, 31, 41-43, 51, 52, having a magnesium fluoride crystal optic window has a 200-210nm range absorption coefficient, or the 42nm crystal 120nm

Art Unit: 2828

transmission is at least 40%, or amount of contamination in the crystal involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Citation of Pertinent References

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. It is cited primarily to show the product of the instant invention.

Myer et al. (US 6567450 or 2002/0044586), Knowles et al. (US 2002/0154671), Partlo et al. (US 2000/0105994), Kleinschmidt et al. (US 6345065), Sparrow (US 20002/0122450) / (US 2002/0122451), Kleinschmidt et al. (US 6421365), etc discloses fluorine narrow band excimer having repetition rate of 4Khz and 193nm wavelength.

Communication Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N Nguyen whose telephone number is (703) 605-0756. The examiner can normally be reached on M-F: 7:30 - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3329.



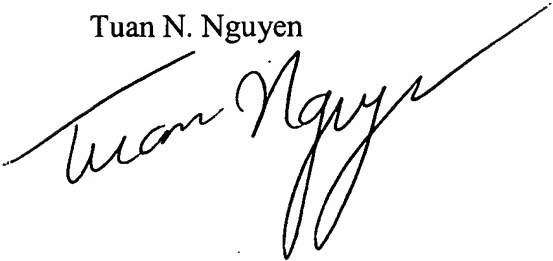
PAUL IP
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Application/Control Number: 10/087,485

Page 6

Art Unit: 2828

Tuan N. Nguyen

A handwritten signature in black ink, appearing to read 'Tuan N. Nguyen', written in a cursive style.